☞05hr_SSC-DNRRR_Misc_pt06k

☞ **Exhibits/comments submitted by Tilton. RE: DNR study regarding Lower St. Croix ordinary high water mark.**

(FORM UPDATED: 08/11/2010)

WISCONSIN STATE LEGISLATURE ...
PUBLIC HEARING - COMMITTEE RECORDS

2005-06

(session year)

Senate Select

(Assembly, Senate or Joint)

Committee on ... DNR (SSC-DNRRR)

COMMITTEE NOTICES ...

- Committee Reports ... **CR**
- Executive Sessions ... **ES**
- Public Hearings ... **PH**

INFORMATION COLLECTED BY COMMITTEE FOR AND AGAINST PROPOSAL

- Appointments ... **Appt** (w/Record of Comm. Proceedings)
- Clearinghouse Rules ... **CRule** (w/Record of Comm. Proceedings)
- Hearing Records ... bills and resolutions (w/Record of Comm. Proceedings)
  (**ab** = Assembly Bill) (**ar** = Assembly Resolution) (**ajr** = Assembly Joint Resolution)
  (**sb** = Senate Bill) (**sr** = Senate Resolution) (**sjr** = Senate Joint Resolution)
- Miscellaneous ... **Misc**

* Contents organized for archiving by: Mike Barman (LRB) (July/2012)

Section Divider

Minnesota Department of Natural Resources

500 Lafayette Road
St. Paul, Minnesota 55155-40__

EXHIBIT
#15

August 30, 2005

Mr. Paul Mosby
Preferred Tours
5884 Prairie Rider Drive
Shoreview, MN 55126

Dear Mr. Mosby:

Minnesota DNR will be submitting comments to the Wisconsin DNR for their considerations at the OHW hearing. Minnesota uses 679.5' for the OHW elevation. Historically, the elevation used for determining setback in Minnesota was 675.0'. Local government will continue to determine what elevation to use for determining setback.

Sincerely,
DNR Waters

Kent Lokkesmoe
Director

000475

Section Divider

Waterway and Wetland Handbook
CHAPTER 40
ORDINARY HIGH-WATER MARK (OHWM)

GUIDANCE PURPOSE AND DISCLAIMER

This document is intended solely as guidance, and does not contain any mandatory requirements except where requirements found in statute or administrative rule apply. This guidance does not establish or affect legal rights or obligations, and is not finally determinative of any of the issues addressed. This guidance cannot be relied upon and does not create any rights enforceable by any party in litigation with the State of Wisconsin or the Department of Natural Resources. Any regulatory decision made by the Department of Natural Resources in any matter addressed by this guidance will be made by applying the governing statutes, common law and administrative rules to the relevant facts.

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I. Purpose

The delineation of the ordinary high-water mark (OHWM) is a critical element in the administration of Wisconsin water law and is necessary for an effective water management program. The OHWM is the boundary between riparian owned uplands and the publicly owned beds of natural lakes. It is the boundary of public rights and interest in the waters of navigable streams and lakes except when the water is above the OHWM public rights are "enlarged." When the water is below the OHWM a riparian owner has a qualified right to use the land between the actual water level and the OHWM.

Department field staff determine the OHWM through on-site investigation and analysis of physical and biological indicators on a case-by-case basis.

II. Definition of OHWM in Wisconsin

Although "ordinary high-water mark" was used in a number of Wisconsin Supreme Court cases in the 1800's, the first definition of ordinary high-water mark is found in the Wisconsin Supreme Court case Lawrence v. American Writing Paper Co. (1911), 144 Wis. 556, 562:

> ...ordinary high-water mark, that is the point up to which the presence and action of the water is so continuous as to leave a distinct mark by erosion, destruction of vegetation, or other easily recognized characteristic.

Three years later the Supreme Court redefined and expanded the definition in Diana Shooting Club v. Husting (1914), 156 Wis. 261, 272:

> By ordinary high-water mark is meant the point on the bank or shore up to which the presence and action of the water is so continuous as to leave a distinct mark either by erosion, destruction of terrestrial vegetation, or other easily recognized characteristic.

One of the contentions in the Diana case had been that public rights in navigable waters "consists of nothing more than a right to pass to and from over the open waters" and that a person had "no right to leave the open part of the stream or push into the vegetation" growing through or above the water along the bank or shore. The Supreme Court did not accept this contention, ruling that public rights in navigable waters extend between the boundaries of the ordinary high-water marks and it is immaterial "what the character of the stream or waters is. It may be deep or shallow, clear or covered with aquatic vegetation." The Court then added the wording "on the bank or shore" and the word "terrestrial" to the Lawrence definition to emphasize that the ordinary high-water mark is not at the edge of open water adjacent to aquatic vegetation but on the bank or shore where terrestrial vegetation either begins or is destroyed.

The "distinct mark" must be manifested by "erosion, destruction of terrestrial vegetation or other easily recognizable characteristic"; however only one of the preceding manifestations need be present to qualify as such a mark. The phrase "other easily recognized characteristic" is highly significant since it allows flexibility as to what indicators in the natural environment qualify as the water-established mark.

Diana also stated:

> And where the bank or shore at any particular place is of such character that it is impossible or difficult to ascertain where the point of ordinary high-water mark is, recourse may be had to other places on the bank or shore of the same stream or lake to determine whether a given stage of water is above or below the ordinary high-water mark.

This tells us two things: the area below the ordinary high-water mark need not be covered with water at all times, and where no mark can be found, one can look for marks in other areas and transfer the information through stage or elevation readings. No court cases have specified what a reasonable distance is to find the OHWM at another site nor whether marks must be transferred from similar areas. No court decisions have modified the Diana definition. The Diana definition is flexible and gives the Department the latitude to analyze varying physical conditions.

The courts have not upheld OHWM determinations which were not based on biological or physical indicators. In the case State v. McDonald Lumber Co. (1962) 18 Wis. (2d) 173, the state charged that the defendant illegally placed fill on the bed of Green Bay. The state did not attempt to use the Diana definition to prove the fill was below the OHWM of Green Bay because all the adjacent land was disturbed. Instead, the state offered an elevation for the ordinary high-water mark based on Lake Michigan water level records compiled by the Army Corps of Engineers for the period 1860-1959. The state asserted that the average of the high-water levels recorded was 581.0 feet above sea level and thus the ordinary high-water mark was at that elevation. The trial court found McDonald guilty of filling part of the lakebed but refused to order removal of the fill because the location of the ordinary high-water mark, the boundary of the lakebed, was not proved by the state.

The Supreme Court sustained the trial court's decision ruling that "the term ordinary high-water mark has been defined in Diana Shooting Club v. Husting (1914), 156 Wis. 261, 172," and "that the location of such ordinary high-water mark was not proved by the state" by its use of water level records.

III. Public and Riparian Rights

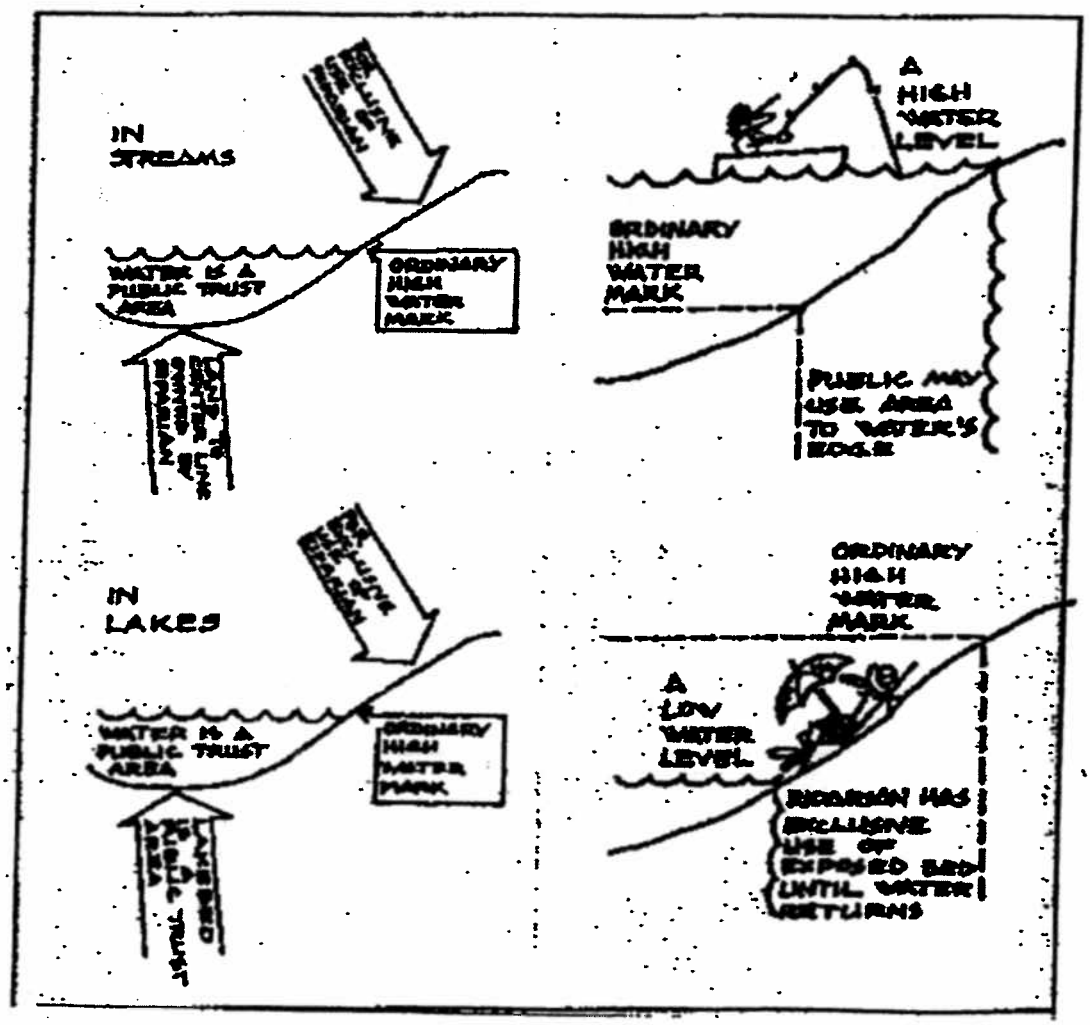
In Wisconsin riparian rights vary in accordance with the nature of the body of water. With respect to the

ownership of the bed of the stream, a riparian owner owns to the thread of the stream (Walker v. Shepardson (1855) 4 Wis. 495; Ne-pee-nauk Club v. Wilson (1897) 96 Wis. 290). The title of the riparian owner is, however, a qualified one, subject to the paramount interest of the state (Muench v. Public Service Comm. (1952) 261 Wis. 492; Ashwaubenon v. Public Service Comm. (1963), 22 Wis. (2d) 38). However, the owner of a land abutting a natural lake owns to the OHWM only, since title to the submerged lands beneath a lake belongs to the state (Angelo v. Railroad Commission (1928) 194 Wis. 543).

Private landowners whose lands make lateral contact with the waters of navigable lakes, where the state owns the bed, enjoy the exclusive right to access for private use (Delaplaine v. Chicago and Northwestern Ry Co., (1877) 42 Wis. 214). The general public can exercise its rights only if access to the water can be gained without trespassing over private property. As the recent decision in State v. McFarren (1974) 62 Wis. 2d 492, which reiterates Doemel v. Jantz (1923) 180 Wis. 225, points out:

> A riparian owner has a qualified right to the land between the actual water level and the ordinary high-water mark; he may exclude the public therefrom but he may not interfere with the rights of the public for navigable purposes.

The sketches below illustrate the public right in relation to the OHWM:



Recall that riparian rights in Wisconsin exist by virtue of ownership of the bank or shore in contact with the water and not by title to the soil under the water (Colson v. Salzman (1956) 272 Wis. 397 and Diedrich v. Northwestern Union Ry Co. (1877) 42 Wis. 248 (involving a lake)). In Wisconsin the general rule is that the owner of the upland abutting a natural stream or body of water is presumed to possess riparian rights. However, because riparian owners may separate the riparian rights from ownership of the abutting lands it "is equally clear that one who acquires land abutting a stream or body of water may acquire no more than is conveyed by his deed" (Mayer v. Grueber, (1965), 29 Wis. (2d) 168).

The presumption in favor of owning a portion of the bed of a waterway is not applicable where an artificial lake or body of water is concerned. "An artificial lake located wholly on the property of a single owner is his to use as he sees fit, provided, of course, the use is lawful. He may if he wishes reserve to himself or his assigns the exclusive use of the lake or water rights." (Mayer v. Grueber, supra). In the Mayer v. Grueber case the court held that the "(D)efendent, who acquired part of a tract of land abutting on an artificial lake by deed described the lake front boundary as running along the easterly bank, could not successfully assert he had been accorded riparian rights to use the lake for recreational purposes as against the claim of the owners of the remainder of the tract who also had title to the submerged land, since he acquired only what was granted by the words of his conveyance - property rights up to the waters edge - and had no ownership rights in the bed of the lake and hence no rights in the waters above."

The ownership of beds underlying artificial lakes or reservoirs caused by the erection of a dam remains in the hands of the abutting owner (or deed holder) unless purchased (Haase v. Kingston Cooperative Creamery Association (1933), 212 Wis. 585). In other words, though a lake now exists, bed ownership is determined as though the prior existing stream still remained. The court ruled "(W)e think the true rule is this: where the owner of land creates an artificial body of water upon his own premises, he may permit the public to enjoy the ordinary use of such waters, and, it may be, that by the lapse of time such enjoyment will ripen into a dedication which he will not be permitted to destroy. But such a use of the waters does not amount to an adverse possession in favor of the state giving the state title to the land under the waters and..."

The court continued "(I)t is true that where waters of a natural, navigable lake are artificially raised, the public and the riparian owners enjoy the same rights in and upon such artificial waters. 'The artificial condition originally created by the dam becomes by lapse of time a natural condition.' Johnson v. Einerman, 140 Wis. 327, 122 N.W. 775. However it does not seem necessary, in order to secure to the public the right which the public has enjoyed for a period of time equal to that required by the statute of limitations, that the title to the land should be held to have thereby passed from private ownership to the ownership of the state."

Among other incidents of riparian ownership, and to preserve the riparian's access to the water, is the right to the land formed by gradual and natural accretions and uncovered by reliction. (Doemel v. Jantz supra., Attorney General Ex Rel. Bay Boom Wild Rice and Fur Co. (1920) 172 Wis. 363 and Baldwin v. Anderson (1968) 40 Wis. 2d 33).) This is true even though the riparian does not have title to the bed of a meandered lake. (Roberts v. Rust (1899) 104 Wis. 619 and Boorman v. Sunnuchs (1877) 42 Wis. 223)

One who owns both banks of a navigable or nonnavigable Wisconsin stream has title to the entire bed of the stream between the boundaries of his land. An interesting exception to the rule that a riparian proprietor owns to the thread of the stream occurs on the Mississippi River. Since that river forms the Minnesota-Wisconsin boundary, and the actual boundary line is the centerline of the main navigation channel of the river, a Wisconsin riparian does not own the bed to the thread of the river, but to the centerline of the main navigation channel (Franzini v. Layland (1903) 120 Wis. 72). The middle of the main navigation channel may be very close to the Wisconsin shore at points and equally close to the Minnesota shore at other points. Consequently, the extent of Wisconsin residents' riparian ownership of the bed would vary, depending on the location of their abutting land. Bed ownership of Lake Michigan as a natural lake is in the bordering states. State v. McDonald Lumber

Company, supra.

IV. Determining the Ordinary High-Water Mark

A. What to look for when making an OHWM Determination

1. Biological Indicators:

a. Mosses: mosses which are located on exposed rocks, stumps, tree roots, etc., are usually considered terrestrial and the lowermost elevation of these mosses is a good indicator of the OHWM. Some water mosses (e.g. Drepanocladus) form long strings and are aquatic and should not be used as indicators of the OHWM.

b. 'Lichen: use these indicators with care for determining the OHWM. Use them mainly for recent, relatively short duration high water stage indicators. Extended high water periods eventually will kill and remove various lichen. Types to look for:

1. Coarse brown lichen - usually lie above extreme high lake stages.

2. Black - usually removed readily by water inundation.

3. Orange Lichen - intermediate in their susceptibility to water destruction.

4. Green Lichen - the lower most elevation of this lichen can indicate the highest water mark in recent years.

c. Trees: the roots of living trees and shrubs along the shoreline will turn up and away from the water. Exposed bases and roots of older trees with roots growing primarily toward the shoreland on a horizontal plane are usually just above the OHWM if no slumpage has occurred.

1. Water roots: Willow trees on the bank will put out red-brown water roots. The start of the water roots will be very near the OHWM. Beware of slumpage.

2. Pancake roots: Birch, maples, tag alder and tamarack will form pancake shaped root mats usually just above the OHWM. Beware of slumpage.

3. Pipe elbow roots: Birch and maple will curve their roots away from water forming a pipe elbow bend. The bottom of the root as it bends away will be very near the OHWM. Beware of slumpage.

d. Pollen: pollen - especially pine pollen - often leaves marks on shore (particularly on large rocks) during spring and early summer. Not an indicator when considered by itself but will indicate recent high-water stages.

e. Large Cattail Mat: The top of large cattail mats are often slightly above OHWM. Be careful of hummocks, floating bogs and mats, but be aware of where they exist in relation to your determination site.

f. Algae stain: On rocks, stumps, etc. look for algae stain lines. On some rocks etc. it is possible that

you find a algae/lichen stain line. Algae marks should not be used as the sole basis for a OHWM determination. Because of high water stages and wave splash algae can grow above the OHWM.

2. Physical indicators: [other easily identified characteristics]

   a. Ice Scars: on trees, soil, etc. Ice marks are usually above the OHWM. Caution prevails in using these, because floods, wind and/or ice expansion can cause ice marks well above the OHWM. They are a good indication of the proximity of the OHWM and can help in a final determination.

   b. Erosion (from wave wash): try using small bays where large waves from high winds would not wash above the OHWM.

   c. Mudstains and debris: Mudstains on trees, stumps, rocks, etc. give a good indication of the proximity of the OHWM. The OHWM will usually be located below the mudstains and debris.

   d. Water stains on rocks, culverts, seawalls, etc.: Water stains on fixed objects are excellent indicators of the OHWM. Generally there will be three stain lines on the object (from the bottom) a gray band, a band of lighter color, and then another band of gray or black. The OHWM is located at the line between the lighter color band and the top dark band.

   e. Leachate marks in the soil: Dig into the immediately adjoining shoreland. Long-term water levels will sometimes leave stain marks in light colored soils known as mottling. Iron is the main coloring substance of the subsoil. Air is absent or in short supply when soils become saturated or nearly saturated with water. When air is absent in the soil, iron exists in the reduced state which is gray in color. When an air supply is present as in well drained soils, the iron is in an oxidized state which is yellowish or reddish in color. Imperfectly and poorly drained soils are nearly always mottled with various shades of gray, brown and yellow, especially within the zone of fluctuation of the water table. Some mottled colors occur unassociated with poor drainage past or present, therefore, such stains should be carefully compared with other indicators. Remember the highest past water level is not necessarily the OHWM.

   f. Change in soil types: Dig into the soil or take cores looking for a change from organic (peat-muck) to mineral soils. Although a soil developing under water may have a high mineral content (usually from water or wind born addition) a soil with a high or exclusive content of organic matter cannot form under well-drained conditions. The presence of a peat or muck profile is therefore a good indicator of a water level that is perpetually at or above the soil surface and thus of an OHWM.

B. Additional considerations

1. Cattails: don't use cattails as sole indicators of the OHWM. Cattail is a clone plant that can be found above and below the OHWM. It is extremely tolerant to extremes in water conditions.

2. Water crawfoot: extremely tolerant of dry conditions, similar to cattails.

3. Steep, cliff areas: avoid steep cliff areas because slumpage of terrestrial vegetation will undoubtedly occur.

4. Disturbed areas: avoid disturbed areas because OHWM indicators will probably be destroyed or absent. If necessary, determine the OHWM elsewhere and transfer the elevation of the OHWM to the disturbed area.

5. Wave windrow areas: avoid wave windrow areas because aquatic and terrestrial vegetation may be smothered by wave carried materials (sand).

6. Trapped water: areas where water is trapped by ice ridges, etc., can indicate an elevated OHWM.

7. Pollen, algae marks as the sole basis: such marks are usually located above the OHWM. Pollen, especially pine pollen, often leaves yellowish marks particularly on large rocks during spring and early summer.

8. Averaging elevations of OHWM determinations. Individual determinations at the same location should be within 0.1 ft. in elevation. Do not average elevations.

9. Winds can cause increased water elevations at ends of long lakes. You may have to return on a calmer day to make an accurate determination of water level with reference to a benchmark. Water levels on the opposite sides of lakes elongated especially in an east and west direction could be effected by prevailing winds. There is therefore a possibility that the OHWM on the east and west ends of such lakes may be at different elevations. If you suspect this to be the case, level work should be tied into U.S.G.S. benchmarks or other reliable datum.

10. On lakes or flowages which are controlled by a dam, be wary of drawdowns, erratic level control operations, broken or missing flashboards, etc., that have or could affect water levels and thus the OHWM.

11. When you have a body of water with an inflow and/or an outflow one of the first things to do in an OHWM determination is to check these locations to see if there are any unusual conditions that could affect your conclusions such as blockages of the inlet or outlet, broken flashboards on the outlet dam, etc. It is also a good idea to tour most of the shoreline and note undisturbed areas before proceeding. If a map of the water body is available, these areas should be marked on the map for further investigation.

12. Remember the highest past water level is not necessarily the OHWM. Whenever possible existing past data on water level reading should be consulted in the determination of the OHWM.

13. Court decisions usually involve the question: could a prudent person have reached the same conclusion as you did in you OHWM determination?

V. How to Locate and Document the OHWM

1. Ordinary High-Water Mark determinations are to be made according to the definition in Diana Shooting Club vs. Husting 156 Wis. 261 (1914).

2. Check district and area files for previous OHWM determinations on the same waterbody. Also check all existing past water level readings.

3. Determine the OHWM using the physical and biological features (indicators) previously identified. Measure the distance of the indicators above or below the water level on the day(s) of observation. The water level on the day(s) of observation should be referenced to an easily identifiable benchmark (one method is to measure down from a culvert or wall to the water level). This benchmark (a measurement spot) should be carefully described and its exact location recorded in writing on the checklist, so that it can be found with ease at a future date if needed.

4. Find another spot near your first measurement and repeat the process. Take an adequate number of

measurements and notes before reaching a conclusion. Elevations of OHWM indicators should generally be within 0.1 feet of each other.

5. You should tie the OHWM elevation into a benchmark of known elevation. The checklist has a space for the elevation of the OHWM. This information could be especially useful when it is necessary to transfer the elevation of an OHWM to an area where there is no distinct mark. The checklist could be consulted to see if there are any OHWM determinations near the site where there was no mark. Then pursuant to Diana, the elevation can be transferred to the site where an OHWM determination is needed.

6. If early aerial photographs or maps of the area exist, they will serve as excellent evidence to support the location of a former shoreline which existed prior to disturbance. You can locate these through local Soil Conservation Services (SCS) offices, the Tomahawk DNR office and the Department of Transportation's Highway Testing Lab in Madison.

7. If you need assistance after exhausting district resources contact the Water Regulation Section.

VI. Educational Materials

There are three pamphlets produced by the Department which should be useful in educating the public on the OHWM and Wisconsin water law:

Wisconsin's Water Regulation Programs Work for You provides a general outline of water regulation permit program.

Public or Private I - Navigability discusses the concept of navigability and how it affects private rights.

Public or Private II - The Ordinary High-Water Mark discusses the relationship of the OHWM to private and public rights.

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ORDINARY HIGH WATER MARK

Definition

Ordinary high water mark - "the point on the bank or shore up to which the presence and action of the water is so continuous as to leave a distinct mark either by erosion, destruction of terrestrial vegetation or other easily recognized characteristic." Diana Shooting Club v. Husting (1914), 156 Wis. 261, 272.

Refer to Chapter 40, Water Regulation Handbook for additional information.

Bed of the waterbody between normal water level and OHWM need not be navigated to assert state jurisdiction (clarified in the Trudeaux case).

Considerations prior to making an OHWM Determination

1. The ultimate decision you make should meet the "reasonable-prudent test." Could a prudent person come to the same conclusion as you?

2. Can you defend your determination sufficiently to hold up in court? This becomes a very important issue where multiple OHWMs are present. Very common for lakes.

3. What kind of documentation will you rely upon to verify your determination? (Plants, water stains, wash marks, etc.) How can someone else varify the location of the OHWM? Will you take photos? Do you need a survey and benchmarks? Will you retain a record of your determination? How? Where?

4. Department liability. As a representative of the state you make a decision that carries great weight. Not only in the sense of determining public and private rights, but your decision is also a potential liability to the state. Recent legislation allows one who is regulated to recover costs and damages for invalid determinations where the judicial system finds the state has erred (see s. 227.115, Stats.). In other words, mistakes can cost lots of dollars.

5. Are you dealing with an altered waterway? Is it a flowage, perched lake or a stream with beaver problems? What has the average annual precipitation been in the past? What is it for the existing year? Are water levels too high (e.g., spring)? Is the waterway frozen (this can have a significant bearing on floating bogs)? All of these factors and more can have a bearing on your ultimate OHWM determination.

Ordinary high water marks are generally established by the presence of water at a given elevation for a minimum of 30-70 days a year, over a twenty year period. Water marks similar to OHWMs can be established in a short period of time. Rely upon OHWM indicators that reflect a long time period. An ordinary high water mark that is indicative of the longest time period will generally be the easiest to defend.

The recommended procedure for determining an OHWM is to identify mature woody upland vegetation and work your way waterward. As you progress waterward you will find transitional plants (plants found above and below the OHWM) and aquatics (plants always found below the OHWM) . Fine tuning of an

OHWM can be accomplished with physical indicators, those generally being wash marks, water stains and soil mottling. These procedures should be repeated on the same waterway at various locations to verify your original determination. Consistent multiple determinations will contribute to your credibility and ability to defend your final decision. Although you cannot use only water level records for the basis of your determination, this data can be used to support or validate your decision. The same holds true for historic photographs and other ancillary data.

Multiple Ordinary High Watermarks - "The Dilemma"

Occasionally you will find yourself in the situation of deciding which one of several distinguishable OHWMs is the right one. The primary factor governing your decision should be which one do you feel most comfortable with and capable of defending. Secondary factors affecting your decision would include parameters generally associated with public interest values such as fishing, swimming, navigation, fish and wildlife habitat, etc. An OHWM that provides protection to these public rights can be used in your defense of an OHWM determination.

That is got to say that these public interest values should dictate your decision (the criteria in Diana dictates your decision!); however, one can effectively argue the benefits to the public interest associated with your determination versus a lower OHWM that does not include these public benefits. One thing you can almost always count on is that your decision will not satisfy everyone's concern.

The following list of plants are indicators that you can utilize in your OHWM determinations. As time progresses this list will expand. If any of you have additional species that you would recommend we add to the list, please share your information.

Aquatic Plants Found Below the OHWM

Scientific Name	*Common Name*
Ranunculus reptans	Creeping buttercup
Dulichium arundinaceum	Three-way sedge
Juncus pelocarpis	N/A
Elodea (Anacharis) canadensis	Waterweed
Eleocharis sp.	Spike rush
Najas lp.	Bushy pondweed
Neobeckia aquatica	Lake cress
Nasturtium officinale	Water cress
Eriocaulon septangulare	Pipewort
Heteranthera 2y.	Mud plantain
Utricularia sp.	Bladderwort
Carex stricta	Niggerhead
Carex comosa	N/A
Carex crus-corvi	N/A
Potamogeton sp.	Pondweed
Zizania aguatica var. angustifolia	Wild rice

Scientific Name	*Common Name*
Nelumbo lutea	American lotus
Nymphia sp.	White water lily
Nuphar microphyllum	Yellow water lily
Potentilla palustris	Marsh cinquefoil
Sparganium hp.	Bur reed
Brasenia schreberi	Water shield
Sagittaria sp.	Arrowhead
Megalodonta Beckii	Water marigold
Potenderia cordata	Pickerelweed
Scirpus fluviatilis	Giant Bulrush
Scirpus validus	Soft Stem Bulrush
Chamaedaphne calvculata	Leather leaf

Transitional Plants Found Above and Below the OHWM

Scientific Name	*Common Name*
Circuta maculata	Water hemlock
Hypericum perforatum	St. John's-Wort
Leersia oryzoides	Cutgrass*
Isoetes sp.	Quillwort*
Alisuma gramineum	Water plantain*
Calla palustris	Water arum
Acorus calamus	Sweet flag*
Cyperus sp.	Nut grass*
Alnus sp.	Alder
Typha latifolia	Cattail
Phalaris arundinacea	Reed canary grass
Phragmites maximus	Reed grass
Salix sp.	Willows
Acer saccharinum	Silver maple
Fraxinus americana	White ash
Fraxinus nigra	Black ash
Fraxinus pennsylvanica	Green ash
Larix laricina	Tamarack
Drosera rotundifolia	Round-leaved sundew
Betula nigra	River birch
Cirsium arvense	Canada thistle
Symplocarpus foetidus	Skunk cabbage
Asclepias incarnate	Swamp milkweed*
Solidago graminifolia	Lance-leaved Goldenrod
Polygonum punctatum	Smartweed
Solanum dulcamara	Purple nightshade
Equisetum sp.	Horsetail
Iris versioolor	Blue flag
Iris pseudacorus	Yellow figg
Quercus bicolor	Swamp white oak
Chelone glabra	Turtlehead
Populus deltoides	Cottonwood
Rumex crispus	Curly dock
Impatiens capensis	Jewelweed*

*Most often located below the OHWM

Plants Commonly Found Above the OHWM

Scientific Name	*Common Name*
Quercus rubra	Red oak
Quercus alba	White oak
Acer rubra	Red maple
Betula lutea	Yellow birch
Betula papyrifera	White birch
Asclepiias syriaca	Common milkweed
Solidago altissima	Tall goldenrod
Pinus sp.	All species of pine
Cichorium intybus	Chicory
Alopecurus ramosus	Foxtail
Canabis sativa	Marijuana
Plantago major	Common Plantain
Xanthium strumarium	Cocklebur
Fragaria virginiana	Common strawberry
Prunella vulgaris	Heal-all
Urtica dioica	Stinging nettle
Pilea pumila	Clearweed
Setaria sp.	Foxtail
Tragopogon dubius	Yellow goatsbeard
Tradescantia virginiana	Spiderwort
Ratibida pinnata	Prairie coneflower
Rudbeckia hirta	Blackeyed susan
Erigeron annus	Daisy fleabone
Plantago lanceolata	English plantain
Daucus carota	Queen Anne's lace
Heracleum lanatum	Cow parsnip
Verbascum thapsus	Common mullein
Oenothera biennis	Evening primrose
Capsella bursa-pastoris	Shepherd's Purse
Trifolium pratense	Red clover

CEDAR

ELM

JAMES "LOUIE" FILKINS
Professional Engineer
Registered Land Surveyor
Certified Soil Tester

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DANIEL P. KUGEL
Certified Soil Tester

JOB. NO. 01-2581

December 28, 2001

Attorney Steve Goff
258 Riverside Drive, PO Box 167
River Falls, Wisconsin 54022

Re: Mike Gresser Property
Lake Street, City of Prescott

Dear Steve;

On October 17, 2001, by letter, you directed me to determine the ordinary high water mark (OHWM) for Mr. Gresser's property located on Lake Street in the City of Prescott, Wisconsin. The enclosed drawing, along with this letter, documents my findings.

You provided me with copies of two Certified Survey Maps recorded in Volume 3, Pages 200, 201, a Site/Grading Plan prepared by Terry Scholz of Colonnade Design Group Inc., dated April 30, 1996, and a letter dated October 12, 2000 to Jayne Brand, City of Prescott, from Eunice Post, Water Regulation and Zoning Specialist, Wisconsin Department of Natural Resources.

I have determined the OHWM using the definition contained in NR118.06(3)(a)(1), Wis. Admin. Code, Standards and Criteria for the Lower St. Croix National Scenic Riverway. NR115.03(6) Wis. Admin. Code, Wisconsin Shoreline Management Program contains a slightly different definition of OHWM, which also applies.

Determining the OHWM along Lake St. Croix is not an exact science. Large annual fluctuations of the water elevation, man made and natural wave action and man made alterations of the shoreline make it difficult to make this determination. My professional opinion is that the OHWM at the Mike Gresser property is elevation 682.0.

Eunice Post's letter indicates that she and Dan Koich, another WDNR employee, determined the OHWM is at elevation 687.16. The 100' building setback line is measured from the OHWM. The more than 5' difference in elevation between the two determinations causes the 100' setback to differ from 8' to 13' across Lot 2, which is the site of Mr. Gresser's proposed home. Eunice Post's determination requires greater setback than mine. These setback lines are shown on the drawing.

The WDNR has made various determinations of the OHWM on Lake St. Croix between the City of Prescott and the City of Stillwater. Based upon those determinations, St. Croix Zoning Office uses elevation 683 upstream from the Interstate 94 bridge in Hudson to Stillwater and elevation 682 downstream from the I-94 bridge to the Pierce County line. Pierce County Land Management Department does not have an established elevation for the OHWM from the St. Croix county line to the City of Prescott.

NR118 Wis. Admin. Code and the equivalent Minnesota Rules were intended to create uniform setbacks on both the Wisconsin and Minnesota sides of the river. The setbacks on the Wisconsin side are usually much larger because Minnesota Rules measure the setback from elevation 675 between Prescott and Stillwater. As shown on my drawing, measuring from elevation 675 rather than 682 or 687.16 is significant. The Minnesota Rules place the setback line riverward of Lot 2. The difference between the Minnesota and WDNR setbacks in this case is an average of 48'.

Respectfully,

Francis H. Ogden

Francis H. Ogden

FHO/rs

Enclosed: Determination of OHWM for Mike Gresser Property Drawing dated 12/28/01

7-29-05

STEVE GOFF
I AM NOW ADVOCATING ELEVATION 677.5 ON THE CITY OF PRESCOTT'S VERTICAL DATUM WHICH EQUALS 677.5 ON THE U.S. CORPS OF ENGINEER'S DATUM.

F. Ogden

000489

City of Hudson
505 Third Street
Hudson, Wisconsin 54016-1694
FAX: (715) 386-3385
www.ci.hudson.wi.us

Dennis D. Darnold
Community Development Di
(715) 386-4776
ddarnold@ci.hudson.wi.u

Elizabeth A. Moline
Administrative Assistant
emoline@ci.hudson.wi.us

Date: July 14, 2005

To: Chris Anderson, Attorney
From: Dennis Darnold, CDD

Sent by facsimile only – 7/14/05

Re: OHWM – City of Hudson / Lower St. Croix River National Scenic Riverway

You asked what criteria the city of Hudson uses to determine the Ordinary High Water Mark (OHWM) or what elevation is used as the OHWM within the city to establish setback requirements for construction within the Lower St. Croix National Scenic Riverway. The city of Hudson has not established a set elevation. In my experience the OHWM is generally at an elevation of 677 msl, plus or minus one-half foot. The characteristics / criteria used by the city of Hudson are specified in Wisconsin Administrative Rules, NR118, Standards for the Lower St. Croix National Scenic Riverway. On-site conditions are verified by inspection by myself, a registered land surveyor or a WisDNR official to determine the OHWM based on characteristics / criteria such as aquatic vegetation and marks established on the river bank due to a continued presence of water. Care should be taken not to misidentify the OHWM with erosion that has been created by periodic flooding that in some instances has left marks on the banks of the river, but may be substantially higher than the OHWM.

000490

Rod Eslinger

From: Post, Eunice A [PostE@mail01.dnr.state.wi.us]
Sent: Monday, November 27, 2000 2:14 PM
To: 'rode@co.saint-croix.wi.us'
Subject: st croix ohwm

here you go

Kolliner Park-683
Mallalieu Dam-685.75
Marzoff-682
Shiely-686 (in Prescott)
Gresser-687 (in Prescott)

to my knowledge, and I will keep checking, this is what is on the books so
far.
Eunice Post
Water Regulation & Zoning Specialist
Lower Chippewa Basin/St Croix Sub Basin Water Team
Wisconsin Department of Natural Resources
Baldwin Service Center
Baldwin WI 54002
715-684-2914

000491

State of Wisconsin \ DEPARTMENT OF NATURAL RESOURCES

Jim Doyle, Governor
Scott Hassett, Secretary
Scott Humrickhouse, Regional Director

West Central Region Headquarters
1300 W. Clairemont Avenue
PO Box 4001
Eau Claire, Wisconsin 54702-4001
Telephone 715-839-3700
FAX 715-839-6076
TTY Access via relay - 711

August 3, 2004

REC. 8-10-04

Rep. Kitty Rhoades
P.O. Box 8953
Madison, WI 53708

Subject: Ordinary High Water Mark determination for Lake St. Croix

Dear Representative KITTY Rhoades:

You are very familiar with the ongoing controversy and misunderstanding regarding the issue of the Ordinary High Water Mark (OHWM) for Lake St. Croix on the St. Croix River. To resolve this matter I have instructed my staff to complete a comprehensive determination of the OHWM for Lake St Croix.

The process that we follow will involve all interested stakeholders and will culminate in a Declaratory Ruling, which is a formal finding that will establish the OHWM elevation on Lake St Croix. This determination can be legally appealed, although it is our intent to provide sufficient opportunity for public input that all stakeholders will accept the ultimate determination, obviating the need for litigation.

We will initiate the process this month, and plan to meet with the Lower St. Croix Partnership Team in September to discuss timelines and input mechanisms. We will also publicize information about the process widely so as to provide opportunity for involvement to any other interested parties. The process will incorporate numerous opportunities for input, including participation in necessary field investigations and information-gathering this fall and next spring. There will also be several meetings throughout the winter where the public will be encouraged to offer information and perspectives on this matter. We will also hold an informal meeting shortly before the final ruling to gather any last minute information or thoughts. We expect to conclude the process and issue a Declaratory Ruling next summer.

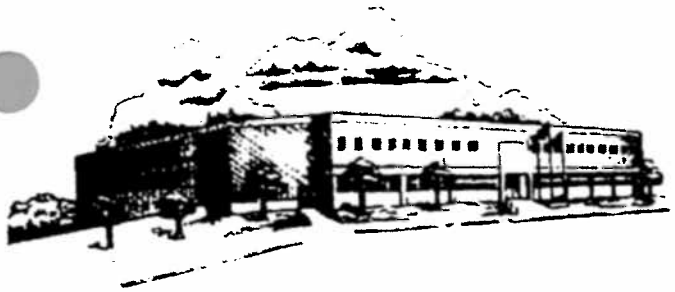
Should you have any questions about this process please feel free to contact Gregg Breese, who will be coordinating the effort for us. Gregg's phone number is (715) 831-3271, and his e-mail address is Gregg.Breese@dnr.state.wi.us. I know this has been a contentious matter for many of your constituents, and I share your desire to have it resolved as quickly, fairly, and definitively as possible.

Sincerely,

Scott Humrickhouse
Regional Director

Ordinary High Water Mark (NR 320.03(4), Wis. Adm. Code): *"Point on the bank or shore up to which the presence and action of the water is so continuous as to leave a distinct mark either by erosion, destruction of terrestrial vegetation, or other easily recognized characteristics".*

000492



ST. CROIX COUNTY
WISCONSIN
ZONING OFFICE
ST. CROIX COUNTY GOVERNMENT CENTER
1101 Carmichael Road
Hudson, WI 54016-7710
(715) 386-4680 Fax (715) 386-4686

March 15, 2000

Bill Tilton
101 E. 5th Street, #2220
St. Paul, MN 55101

RE: 278 West Grove Road

Dear Mr. Tilton:

Per our discussion on March 9, 2000, regarding your plans to expand your existing structure, I have the following comments.

As you are aware, your house is located in the floodplain of the St. Croix River (Lake St. Croix), in the St. Croix County River Valley District, and in the St. Croix County Shoreland District. Note: You are subject to comply with all of the St. Croix County Zoning Ordinance provisions related to Floodplain Zoning, Shoreland Zoning, and the St. Croix County River Valley District.

On March 10, 2000, I met with Gary Lepak, DNR engineer, to review your protect. Mr. Lepak pointed out that the floodway elevation for the St. Croix River, south of the I-94 Bridge, corresponds to the 688 foot contour line. The regional flood elevation (RFE) is listed at 691.6 feet above mean sea level (msl). The floodway determination is an acceptable floodway delineation by the county and the DNR.

Mr. Lepak also indicated that Dan Koich of the Department of Natural Resources established the Ordinary High Water Mark (OHWM) at 682 feet above mean sea level for the St. Croix River south of the I-94 Bridge. The Department of Natural Resources can establish the OHWM according to section 17.26 (4) (b.). These elevations for the OHWM and for the floodway for the St. Croix River, south of the I-94 Bridge, have been applied to other projects along this portion of the St. Croix River (Lake St. Croix).

According to your site plan submitted by James Filkens, it is very clear that your house is shown at an elevation which is below the identified floodway elevation of 688 feet above mean sea level. Therefore, you must comply with Sec. 17.47 (2) of the Floodplain Ordinance.

Furthermore, your structure does not meet the dimensional setback requirements as established in the St. Croix County Shoreland Ordinance (75 feet from the OHWM) and St. Croix County River Valley District Ordinance (200 feet from the OHWM). The proposed additions, as shown on your site plan, do not meet the provisions listed in the St. Croix County Zoning Ordinance for the following reasons:

1. It is found that your structure is located in the floodway of the St. Croix River.

2. Your structure is located 65 feet from the OHWM. This does not comply with the dimensional setback requirements as established in the St. Croix County Shoreland Ordinance. (Sec. 17.31 (2) - 75 feet from the OHWM) and the St. Croix County River Valley District (Sec. 17.36 (4) (c) (1.) - 200 feet from the OHWM).

    a. The **deck addition as shown on the plot plan,** increases the size of the existing deck. By adding on to the deck you are increasing the nonconformity of the structure. You may apply for a variance, however the applicant must prove hardship.

b. The **house additions (#2 & #3 as shown on the plot plan)** on the southeast side of the house also increases the nonconformity of the structure by adding onto the footprint and will not be considered with this project. You may apply for a variance, however the applicant must prove hardship.

If you have any questions, please do not hesitate to call.

Sincerely,

Rod Eslinger
Zoning Specialist

Cc: Louie Filkens
Gary Lepak, DNR engineer

Sent 12/10/04

To: dan.baumann@dnr.state.wi.us
From: Paul Montgomery <apintl@pressenter.com>
Subject: 675 MSL
Cc:
Bcc:
X-Attachments:

Dan,

Much earlier our Land Use Advisory was unanimous in recommending WI adopt MN's 'Rivers Edge@675' concept. If keeping 'O.H.W.M.', set it at 675 MSL for WI.

That exact figure is required by the Corps of Engineers to maintain the level of Lake St. Croix @ not less than 675MSL.

This figure has been sanctioned universally and is THE number for WI to endorse for inclusion in DNR doings as reasonable, dependable and identifiable. 675MSL is THE level from which to measure set back.

In Prescott we NEVER AGAIN want to see the 'ever-moving stake dance' as performed by Ms. Eunice Post on the contested Gresser lot. Be the Leader!

I strongly advocate providing Free '675' tattoos for St. Croix landowners!

Paul

P.S. At Mosinee I advocated that if you could not settle on 675 then go to 674!
I'm indelibly back to 675.

–

Paul Montgomery
A&P International
577 Locust Street
Prescott, WI 54021

EIN 41-1436456
Phone: 715-262-5788
Fax: 715-262-3823
http://www.pressenter.com/~apintl

To: **MATTed**
From: Paul Montgomery <apintl@centurytel.net>
Subject: Below
Cc:
Bcc:
Attachments:

Prescott Journal + Published 8/25/05
+ Area Publications

Letter to Editor

WI-DNR Meeting

Dear Editor,

The WI-DNR is hosting an important Public Hearing to the High Water Mark on the Lower St. Croix. We urge anyone who owns property on or near the river to attend. The DNR's game is to 'scientifically' proliferate their control over the WI side. Normal pool is 675' as maintained by the US Corps of Engineers. That height also has been chosen by MN-DNR.

WI-DNR will divulge a figure we suspect will be around 8' higher (683'). This means the new Ordinary High Water Mark on the Lower St. Croix will adversely affect riparian homeowners in Pierce & St.Croix Counties (includes Prescott & Hudson).

Setbacks for building permits are determined by a distance measured from the High Water Mark. New construction of highly-taxed St. Croix shoreline homes/additions in WI will be pushed back to infinity. Construction on the riverway will all but cease if the DNR gets by with this senseless litigation.

The meeting is Wednesday, August 31 at 6:00 p.m. in the St. Croix County. Govt. Cntr, 1101 Charmichael Rd, Hudson. Statements & questions will be heard. Written comments have the same weight as oral statements. Send them to: B. Dale Simon, 101 S.Webster, FH/6, Madision WI 53707. Comments must be received by Sept. 30th.

A follow-up letter will be submitted to announce the High Water Mark figure demanded by DNR. The deadline & address for written comments will be repeated.

Paul Montgomery
Prescott, WI

262-5788

Paul Montgomery
A&P International
577 Locust Street
Prescott, WI 54021

EIN 41-1436456
Phone: 715-262-5788
Fax: 715-262-3823
http://www.a-p-international.com

000496

2905 Lexington Avenue South Eagan, MN 55121 651-454-5976 Fax 651-454-4850

FACSIMILE TRANSMISSION – COVER SHEET

TO: STEVE GOFF FAX# 715-425-7413

COMPANY: LAW FIRM

FROM: MIKE C. GRESSER

Facsimile Number: (651) 454-4850

This transmission contains 3 page (s) including this cover page.

Date: 8-25-05 Time: 1:30 p.m.

Dear Steve: Please find a letter from Mr. Paul Mosby regarding the WI DNR meeting on 8-31-05 @ Hudson Wisc. Also Steve, who has my file on my Prescott property? If possible I'd like to have breakfast with you before 8-31-05 meeting. If that's possible, please call me at 612-720-5515.

Hope you are feeling fine.

Mike C.

ST. CROIX LANDOWNERS ASSOCIATION

URGENT

ORDINARY HIGH WATER MARK
The point from which setback is measured.

Lake St. Croix is that body of water from just above Stillwater, 24 miles, to the Mississippi River. The federal government aptly calls it a lake with a river flowing through it. The two states call it a river. Inclusion of the St. Croix under the federal Wild and Scenic Rivers Act in 1974 requires both states be as similar as possible in regulation of the resource.

The Wisconsin DNR is in the process of setting a new OHWM on Lake St. Croix. They are considering making the OHWM 8 to 9 feet higher than that used by the Minnesota DNR on the west side of the lake.

Lake St. Croix is impounded water; impounded by lock and dam 3 on the Mississippi River. Therefore, the water level on Lake St. Croix is artificially set and maintained. On average, for more than 9 months of the year, this water level is 675 ft. mean sea level – 1912 datum. The rivers edge at 675 is an easily identifiable and predictable point from which to measure setback.

Setback is the most critical issue in determining what you can do on your property. Namely, whether your dwelling and other structures are dimensionally nonconforming or even the future possibility of any new construction. Setback, in fact, determines the value of your property.

A blue ribbon panel was formed by WIDNR in 1999 to debate Lower St. Croix land use matters and make recommendations to them. This group was made up of 80% local government representatives and 20% stakeholder group representatives. It met 22 times over a period of 3 years. On April 14, 1999, this group, **the Lower St. Croix Land Use Advisory Group, after lengthy debate, voted unanimously to recommend WIDNR adopt the term "rivers edge at 675" to be used as the point from which to measure setback - - - just as Minnesota has for more than three decades on Lake St. Croix.**

The Wisconsin DNR refuses to accept "rivers edge at 675" as the point form which to measure set back and instead insists upon OHWM. This will create and maintain significant differences in nonconformities on the Wisconsin side vs. Minnesota. This is flatly unacceptable.

Very credible studies by private engineering firms (both Barr and Ogden) in recent years have found the OHWM on Lake St. Croix to be 677 ft. mean sea level – 1912 datum. The City of Hudson has used 677 ft. mean sea level – 1912 datum for more than 15 years while the WIDNR has forced the Village of North Hudson to use 687 ft. mean sea level.

W 12821 720th Avenue • River Falls, WI 54022

WIDNR has now decided to hold a public hearing on OHWM on Lake St. Croix.

- **WHEN:** August 31, 2005 from 6 to 8 p.m.
- **WHERE:** St. Croix County Government Center, 1101 Carmichael Road, Hudson, WI
- **WHAT:** Strongly advocate Wisconsin DNR adopt "rivers edge at 675" feet mean sea level – 1912 datum as the point from which setback is to be measured on Lake St. Croix.
- **WHY:** **Your basic property rights are threatened by an excessively high OHWM. This, with NO increase in the preservation or protection of the resource.**

Please try to attend this hearing and express your strong dissatisfaction with WIDNR process relating to OHWM and adamantly advocate adoption of "rivers edge at 675 feet mean sea level – 1912 datum" for setback measurement point!

Additionally, e-mail the same brief comments to Scott Humrickhouse, Sheila Harsdorf and Kitty Rhoads.

Scott Humrickhouse, Reg. Dir.
West Central Region
Wisconsin Department of Natural Resources
Phone: 715-839-3700
Fax: 715-839-6076
E-mail: scott.humrickhouse@dnr.state.wi.us

Sen. Sheila Harsdorf
Phone: 608-266-7745
Toll Free: 800-862-1092
Fax: 608-267-0369
E-mail: sen.harsdorf@legis.state.wi.us

Rep. Kitty Rhoades
Phone: 608-266-1526
Toll Free: 888-529-0030
E-mail: rep.rhoades@legis.state.wi.us

If you cannot make the hearing, PLEASE make an effort to send three brief e-mails. No details or explanations are necessary.

If you have questions or need more information, I may be reached at 715-262-5299.

Paul Mosby, President
St. Croix Landowners Assn.

ohwm notes

GET MINNESOTA Setback Law ----------
= reason for original Petition =,make setback from 675, like in MN.
Vs. E. Post Petition notarized 8-19-05 and never previously avail. to public.
GET USGS maps for St. Croix below Afon
GET: COE Wetland book
++
GET: Wis. Stat. 227.41 – petition by party agency m issue Decl Ruling. Full oppo. For hearing shall e afforded to interested paraties. A ruling shall be subject to review in the circuit court.
GET Wisc Stats 59.971 re ordinary high water mark vs. normal high w elevation
Hudson: data Doug Zahler, S & N Surveying, few yrs ago for Hudson, Darnold Denny
vs DRN public statements

Jamie: My right to OWHM Determination for my land.
Prescott Elevations Data has **2 yr. Flood @ 681.2**

Water Elevations on dates:

9-7-04	675.55	Kinnickinnic St. Park, Slough area, T 1
5-18-05	678.45	Rolle
5-19-05	678.80	Twin Springs T 1
6-22-05	681.3	c. 18 (Rolle?)
7-12-05 1:15p	676.66	Lk M. T 1
7-13-05, 10a.	676.40	Lake Mallelieu Dam/Union Pac. RR. Co.T 1
7-13-05 11:30a.	676.38	Union Pac. RR prop near dam, T 2
7-13-05 2:30 p.	676.38	Prescott T 1

Kinni. Notes 'no clear break in the mean wetland indicator value at this site.'

Relevance of Stain Lines???

See chapter 40 – algae stains are **not** OHWM

Misidentified Field Site Locations on submitted map

Lake Mallalieu Dam photo has tree in standing water. ??? water elev that day?

Rolle photo has tree in water!!
Prescott photo has trees at very edge of water.
Rolle Photo shows abundant moss.
Photos at Twin Springs w trees in water.

Say they inventoried vegetation at Rolle prop. Where is it? What about mosses?

E Post: Cooperative Management Plan id's Lower St Croix National Scenic Revcerway an 02 as "Rivcer Town – Hudson and approximately 2 miles south of Hudson"

The department does not have the survey information for the 682 and 687 OHWMs. The 685.75 OHWM was set and surveyed by Department Staff (See Exhibit A.16)

ASK: why my prop not surveyed?
What other sites were requested? When?
What were elevations of mature trees at Union Pac RR prop?
Elevations/evaluations of moss at any site?
V. chapter 40.
Notice moss Under the water at Rolle prop?
Why are STAINs relevant? How det'd not just from a single flood?
Why erosion marks relevant? How det'd not from single events?
Where are all Chap 40 data for each site?

Define hydric soils? See Field Work Information

Filed Work Info:

Twin Springs:

Measured **Top** of pipe elbow root, but Chap 40 says "The bottom of the root as it bends away will be very close to the OHWM."
measured **top** of moss, but Chap 40 says "lowermost elevation of thees mosses is a good indicator of the OHWM."

Relevance of/Definition of :

hydric soils vs terrestrial soils (+why not terrestrial vs acquatic vegetation)
trees with multiple trunks
trees with buttressed roots
trees with shallow roots
trees with exposed roots

trees with adventitious roots - willows at Kinnickinnic
water stains, I have stain on my prop from the 1965 flood.
+ See chapter 40 – algae stains are **not** OHWM
Kinni: "Biological indicator is vegetation growth immediately above natural riprap of pier (elevation 682.18)" re Transect 2
Hydric soils vs. hydric vegetation (V. Acquatic vs. terrestrial)
vegetation exotic species
Munsell color (Mallelieu Dam site)
water dependent species vegetation
Herbaceous (non-wood) vegetation from densely vegetated area 15+ ' from water (Lk M)
Sneezeweek, Henenium autumnale; Marsh aster, Aster simplex; etc
hydrophytic species (water loving) above, + more
redox concentrations (reddish mottles), = accumulataions of iron and manganese oxides
predominantly upland vegetation at the beginning of the poison ivy growth (Lk M)
sparse woody vegetation (Lk M)
predominantly woody vegetation (Lk M) listed several

Cobble Line
Cobble Drift Lines

Water Dependent Vegetation is "good Biological indicator' per UP/LkM photo (EP Jan 05 board?)

Sandbar Willows? (Kinni)
Submergent vegetation (under water) vs emergent (plants rooted underwater and stems are both below and above water surface) (Kinni)
Indicators of continuous water: dead tree stumps and water dependent vegetation (K)
ice ridge (K)
Lake Sedge, Carex Lacustris

Permanence (listed as Physical indicator by EP via Jan 05 Board? Or Aug??)
Predominance " " " " ""

"The stain line on the dolphins [barge dolphines at the King Power Plant] is a good example of both permanent and predominate[sic]. As the indicator is a line, it is accurate as well."

Water stain at Kinnickinnic important b/c on both artificial and natural rip rap.!

The Stillwater Earthern Causeway !!

Coefficient of Conservatism (Twin Springs data)

Debris lines – I have from 2001 flood
Debris/drift lines

W = weed
SDM = ? Community?
Vs. FN (Fen)
vs. SB Sand Barren Habitat (=SDM wetland indicator value?)
Vs. SB Prevalent
Obligate (OBL?) To Facultative Wet (FACW?) To Facultative + or - to

Erosion Line/Pea gravel erosion line/Older erosion line/another erosion line (LkM)
Grey stain/Bleach stain/Dark Gray stain (Lk M)

Browse Line

Corroborating Date
- Water level records
- Rainfall records
- Time series photography

"Dead Oak @ 224' fr O first instance of terrestrial vegetation." = red ink on reverse of photo taken at Kinnickinninc, c. 25, 682.8 feet.

Source of aerial photos??
Where is OHWM on various DNR photos???

EP Tilton data comments: p. 8. See Ex. E.02

Chap 40 mentions "the checklist" p. 8. Where are they?

Materials:

Lawrence decision: "the ownerr of water power is entitlte the whole year round to the use of the stream and the banks below ordinary high-water mark as nature has created them."

Shillcox: EP says no data for 682

LOWER ST. CROIX NATIONAL WILD AND SCENIC RIVER
ORDINARY HIGH WATER MARK

Ordinary High-Water Mark

- "By **ordinary high-water mark** is meant the point on the bank or shore up to which the presence and action of the water is so continuous as to leave a distinct mark either by erosion, destruction of terrestrial vegetation, or other easily recognized characteristic.
    - *Diana Shooting Club v. Husting (1914)*

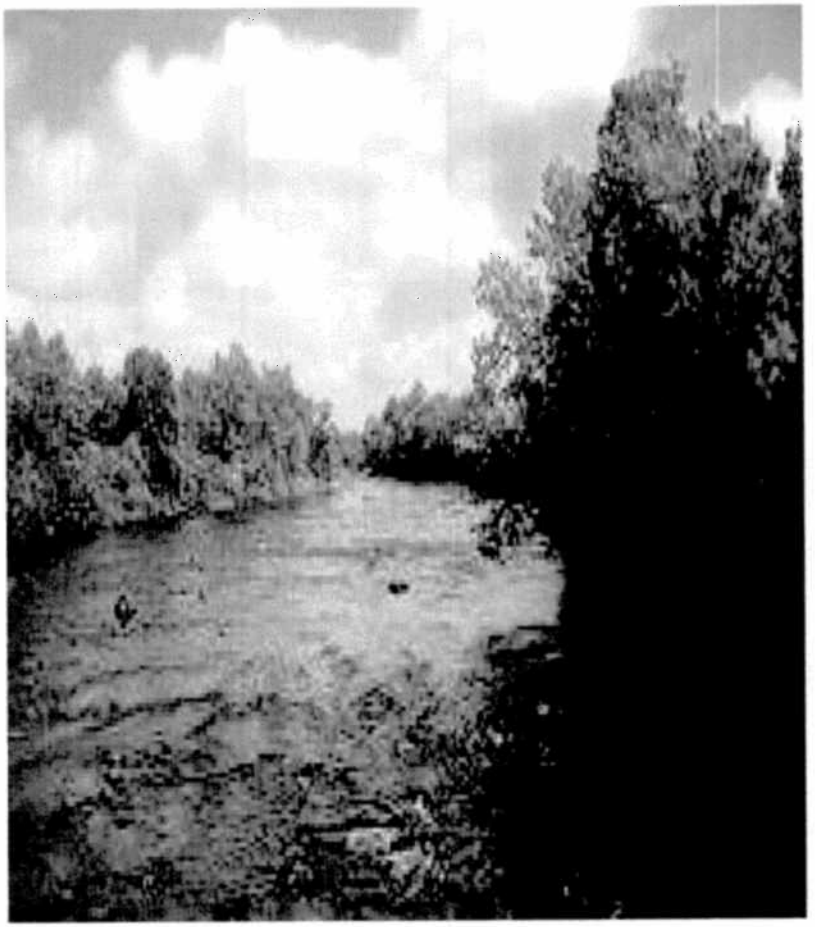
Ordinary High-Water Mark

- … And where the bank or shore at any particular place is of such a character that it is impossible or difficult to ascertain where the point of ordinary high-water mark is, recourse may be had to other places on the bank or shore of the same stream or lake to determine whether a given stage of water is above or below the ordinary high-water mark."

The Ordinary High Water Mark

The ordinary high water mark is defined the same for streams as for lakes.

Muench v. PSC, 1952



Identifying the OHWM

- Biological Indicators
  * multiple trunks on woody vegetation
  * buttressing of tree trunks
  * adventitious roots
  * change in vegetation from aquatic to terrestrial
  * shallow root systems

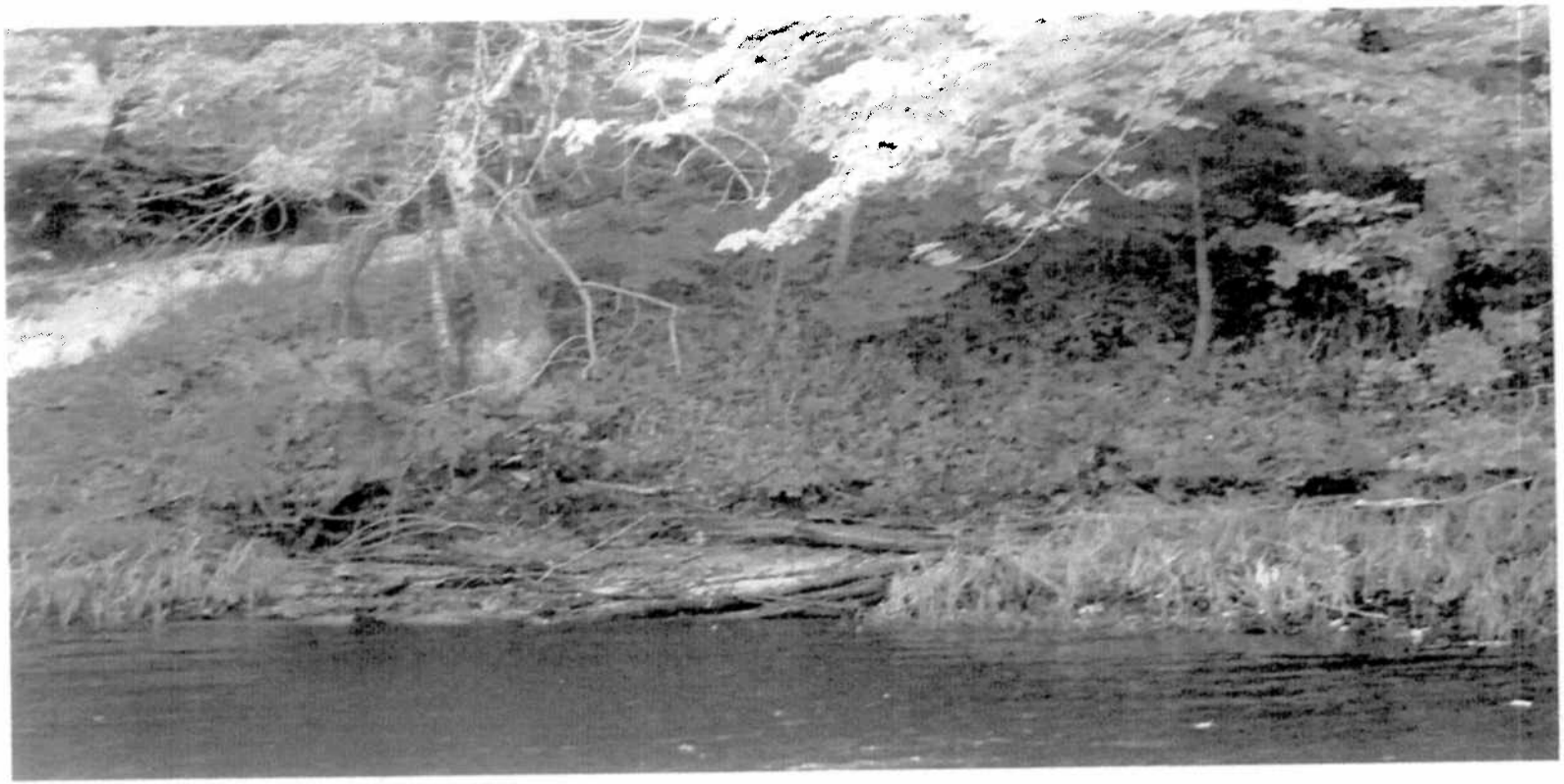
TWIN SPRINGS

TRANSECT 1

The biological indicators we found here were one pipe elbow root and multiple tree trunks on several trees

Identifying the OHWM

- Physical Indicators
  - exposed tree roots
  - erosion from waves creating a washmark
  - mud stain or debris line
  - water stains on rocks/culverts/seawalls
  - leachate marks in the soil



TWIN SPRINGS---TRANSECT 2

The erosion line and exposed tree roots are both examples of physical indicators that we look for to find the OHWM.

LAKE MALLALIEU DAM

The water stain on the dam is an excellent physical indicator.

OHWM - biological and physical

SOME INDICATORS WE FOUND ON THE ST CROIX:

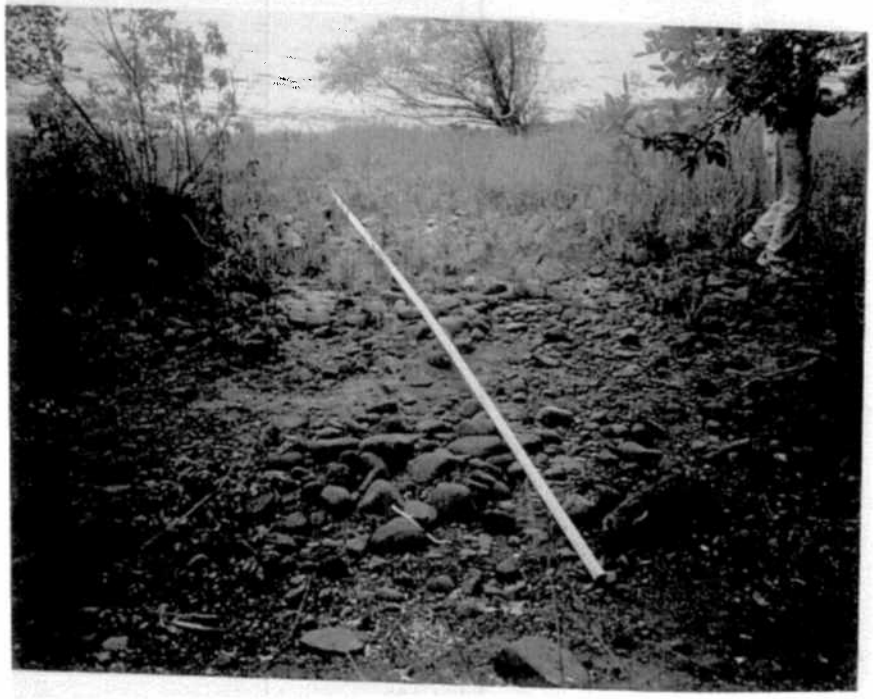
Multiple tree trunks

Exposed roots

Shallow roots

Cobble drift line

Hydric vegetation



UNION PACIFIC
RAILROAD PROPERTY

Notice the multiple tree trunks, shallow root systems and water dependent vegetation-all good biological indicators.

The exposed tree roots and cobble drift lines are good physical indicators.

BOB ROLLE'S PROPERTY---TRANSECT 1

Notice the water stain—Gary Lepak is standing at the top of the light stain and Bob Rolle is standing at the bottom of the light stain—excellent physical indicator

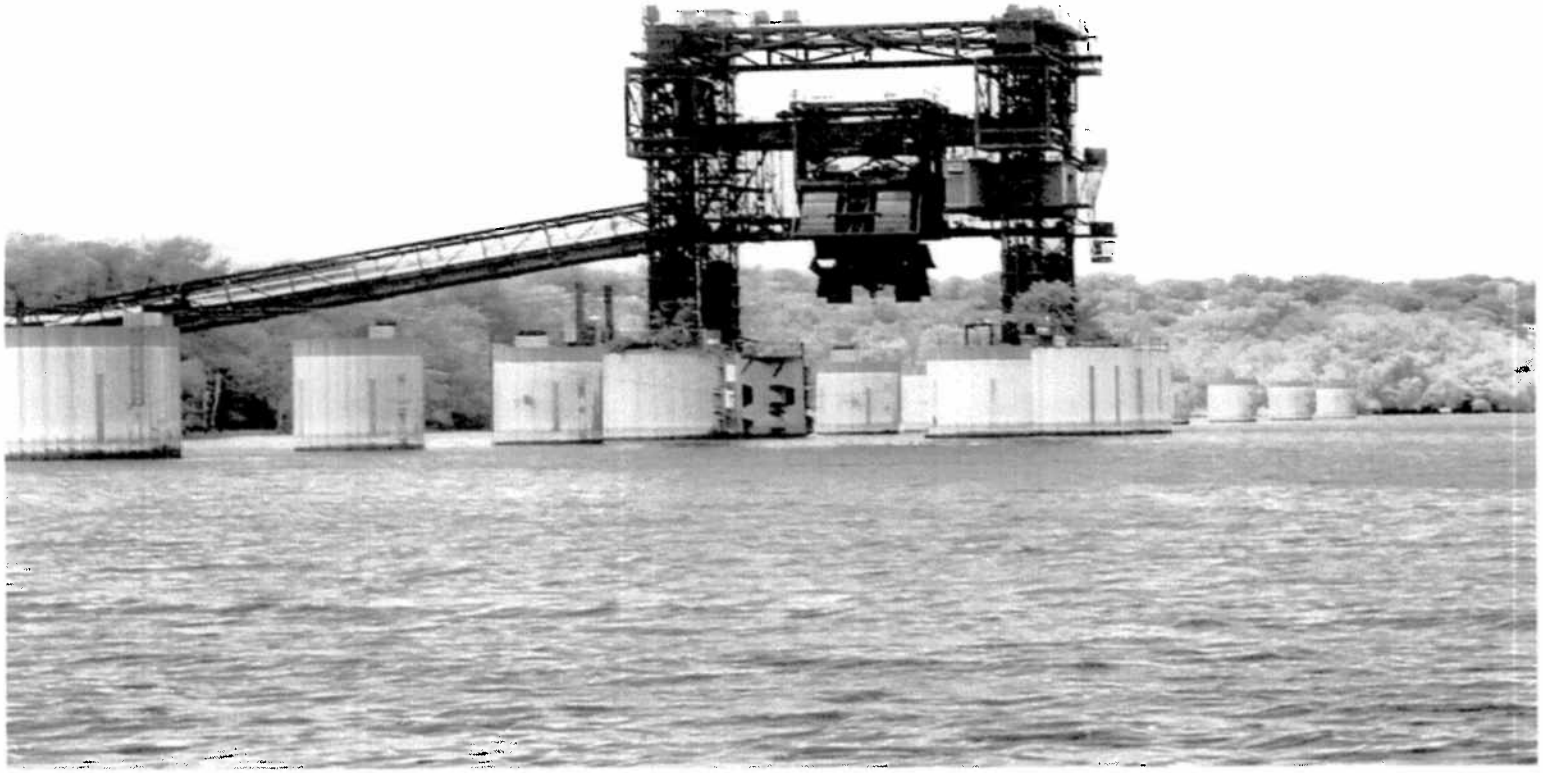
Identifying the OHWM
Physical indicators

- Permanence

- Predominance

To find the OHWM, we focused on which indicators which were well established and most pronounced to find an accurate elevation.

This is what we found……



BARGE DOLPHINS AT THE KING POWER PLANT

The stain line on the dolphins is a good example of both permanent and predominate.

As the indicator is a line, it is accurate as well

KINNICKINNIC PARK PIER AREA

The water stain is shown on both the artificial riprap and on the natural riprap---notice that this is not a break in the stain

THE STILLWATER EARTHEN CAUSEWAY

Same staining pattern—

Elevation of stain is within 0.1 foot as stated in Ch. 40 of the guidebook

Identifying the OHWM

Corroborating Data

- Water level records
- Rainfall records
- Time series photography

Why These Sites?

- Equally spaced in the reach of river that we did our field work
- Provided a good sampling of the different types of shoreline in the lower 25 miles of river
- Minimal trespass or access concerns
- Convenient—minimal intrusion onto private lands
- Two sites were requested

The Department did receive other requests for field work, but logistically, we could not conduct the needed field work and meet the August 31 public hearing deadline.

GIVEN THAT...

Water levels of the St Croix have been documented to be at generally 681 for 30 days over a 20-year record,

the presence, the variety of indicator types, and the consistency of the various indicator types, both biological and physical, begin at low control pool of 675 and end in a general range of 681-682,

the permanence and predominance of the water stains found spanning most of the river in the "state zone," and

the guidebook states that the OHWM is not at the edge of open water adjacent to aquatic vegetation, but on the bank or shore where terrestrial vegetation either begins or is destroyed;

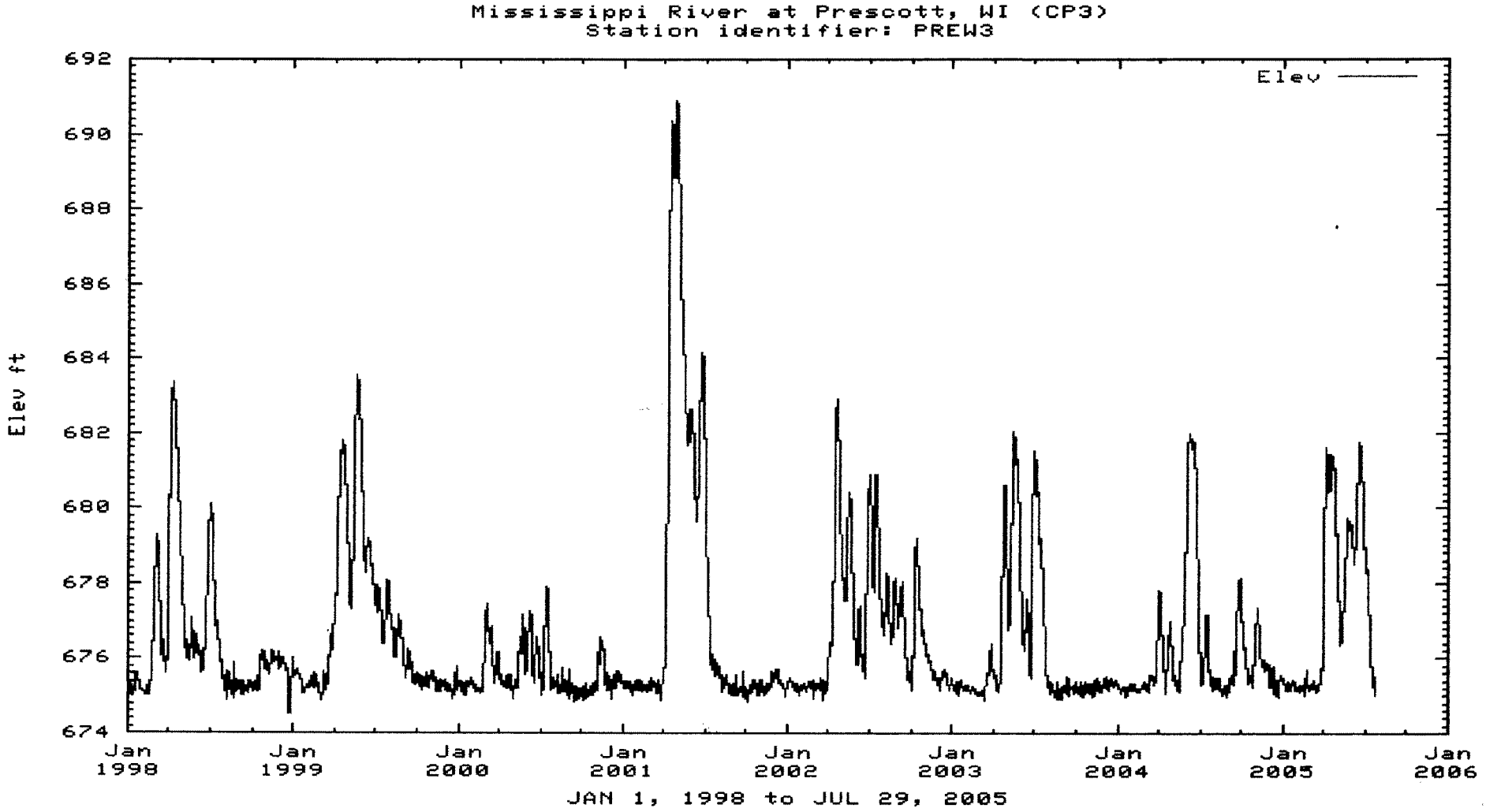
staff offers elevation 681.5, 1912 Adjustment, Corps datum as the ordinary high water mark of the St Croix in the lower 25 miles known as the "state zone."

THANK YOU!

Since this project began, we have asked for your ongoing participation and input.

We appreciate all of you taking time out of your busy schedules to attend our previous informational meetings, attend this meeting, and all of your work.

Elevation Data @ Prescott (1912 adj)



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